

WHAT IS CLAIMED IS:

1. A substrate bonding apparatus which bonds two substrates together with a sealing agent applied to and spread in the form of a frame on one of the substrates, comprising:

a first retaining table having a retaining surface which retains one substrate thereon;

a second retaining table opposed to the first retaining table and having a retaining surface which retains the other substrate thereon;

a nonviscous elastic material provided on that part of the retaining surface of at least one of the retaining tables which retains the substrate thereon; and

drive means which relatively drives the first and second retaining tables in the vertical direction so that the substrates on the respective retaining surfaces of the retaining tables are bonded together with the sealing agent.

2. A substrate bonding apparatus according to claim 1, wherein the elastic material is divided into a plurality of elastic pieces.

3. A substrate bonding apparatus according to claim 1, wherein the elastic material has an A-scale Shore hardness of 40 to 90.

4. A substrate bonding apparatus according to claim 1, wherein the elastic material is divided into

a plurality of elastic pieces and has an A-scale Shore hardness of 40 to 90.

5 5. A substrate bonding apparatus which bonds two substrates together with a sealing agent applied to and spread in the form of a frame on one of the substrates, comprising:

 a first retaining table having a retaining surface which retains one substrate thereon;

10 a second retaining table opposed to the first retaining table and having a retaining surface which retains the other substrate thereon;

 an elastic material divided into a plurality of elastic pieces provided on that part of the retaining surface of at least one of the retaining tables which
15 retains the substrate thereon; and

 drive means which relatively drives the first and second retaining tables in the vertical direction so that the substrates on the respective retaining surfaces of the retaining tables are bonded together
20 with the sealing agent.

 6. A substrate bonding apparatus according to claim 5, wherein at least some of the elastic pieces on the retaining table are formed having a first communication hole each, the first communication hole
25 being connected with decompression means such that the substrate can be attracted to and held on the elastic pieces by means of a sucking force generated in the

first communication hole by the decompression means.

7. A substrate bonding apparatus according to claim 6, wherein the elastic pieces are removably provided on the retaining table, the retaining table
5 having second communication holes which individually open in those portions thereof to which the elastic pieces with the first communication hole are attached, the first communication hole is connected to the decompression means through the corresponding second
10 communication hole in a manner such that the elastic pieces with the first communication hole are attached to the retaining table, and the second communication hole is closed when the elastic pieces without the first communication hole are attached to those
15 portions of the retaining table in which the second communication holes open.

8. A substrate bonding apparatus according to claim 5, wherein the elastic material has an A-scale Shore hardness of 40 to 90.

20 9. A substrate bonding apparatus which bonds two substrates together with a sealing agent applied to, in the form of a frame, on one of the substrates, comprising:

a first retaining table having a retaining surface
25 which retains one substrate thereon;

a second retaining table opposed to the first retaining table and having a retaining surface which

retains the other substrate thereon;

an elastic material having an A-scale Shore
hardness of 40 to 90 and provided on that part of the
retaining surface of at least one of the retaining
5 tables which retains the substrate thereon; and

drive means which relatively drives the first and
second retaining tables in the vertical direction so
that the substrates on the respective retaining
surfaces of the retaining tables are bonded together
10 with the sealing agent.

10. A liquid crystal display panel which has two
substrates bonded together with a sealing agent applied
to, in the form of a frame, on one of the substrates,
the substrates being bonded by means of a bonding
15 apparatus which comprises:

a first retaining table having a retaining surface
which retains one substrate thereon;

a second retaining table opposed to the first
retaining table and having a retaining surface which
20 retains the other substrate thereon;

a nonviscous elastic material provided on that
part of the retaining surface of at least one of the
retaining tables which retains the substrate thereon;
and

25 drive means which relatively drives the first and
second retaining tables in the vertical direction so
that the substrates on the respective retaining

surfaces of the retaining tables are bonded together with the sealing agent.